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The Coal Situation in Europe

By H. E. COUSENS.

Supplies.

The United Kingdom is at present the only country in Europe with a coal supply adequate to its internal needs. Its production has declined from 287½ million tons in 1913 to 229½ m.t. in 1919, with a prospective 240 m.t. in 1920. In 1913 the home consumption took 189 m.t., bunker coal 21 m.t., and export coal 73 m.t. The present home demand is from 5 per cent. to 10 per cent. above that of 1913 and in 1919 many complaints were made that supplies were perilously short and bad in quality. Serious reductions have been made in the amounts for bunker and export. The Government fixed exports for 1920 at 21 m.t., though for the first eight months they have been made at the rate of 27½. In September the expectation of a miners' strike has reduced them practically to nothing. Bunker coal so far this year has been at the rate of 13½ m.t. Despite the damage done to English foreign trade as a whole and to the export coal trade in particular these restricted quantities cannot be much exceeded except at the expense of a full home supply. The coal strike in October will necessarily affect both output and exports.

Belgium in 1913 produced 28 million metric tons and in 1919 18.4 m. m.t. Since the middle of this year she has produced about as much as in 1913, but since she requires an extra quantity to complete reconstruction work, and used to export several million tons in exchange for other sorts of coal more suited for certain industrial purposes, she is still far from normal, because N.E. France, her chief source of these supplies, is still partly derelict. Nevertheless Belgium is well on the way to recovery, with the aid of the German Treaty coal.

France consumed before the War 63 m.t. of coal and coke. She produced 40 m.t. at home, and imported 20, besides coke. The destruction of the mines in Nord and Pas de Calais cut her production in half, so that in 1919 she only produced 20 m.m.t. They have been partially restored and are recovering faster than was expected. Excluding Saar and Alsace-Lorraine, French output may be as much as 27 m.t. for 1920. The addition of these two fields to France does not alter the general situation, for their own demands fully absorb what they produce, especially since the Saar field has dropped from an output of 13.8 m.t. a year to not more than 8. The British Government agreed that France should get 45 per cent. of British exports, and this year she has so far (Sept.) received coal at the rate of nearly 13 m.t. a year. This is about the same amount as she imported in 1913 from Eng. and and less than she got last year, though now England has more coal than then. Under the Spa Protocol France is to get 1.6 m.t. a month. Of course, during the first half of this year she got much less than this a month. In 1920 therefore Germany will supply her altogether with not more than 13½ m.t. Her total supplies with amounts imported from the United States will consequently come to 56 or 7 m.t. Considering her reconstruction demands she is therefore undersupplied. Some French writers claim that the new engineering works started during the War should be kept running. This increases the demand by 8 m.t. According to some German calculations, France is very well off for coal, but these are not reliable. Some of them are based on August figures, which mean an average of only 52 m.t. Bigger stocks seem collected for the coming winter, and to that extent things are better than last year. Transport difficulties have hindered proper distribution. France should not claim more at the expense of the rest of Europe.

Italy is very much worse off than France. Her own resources are incapable of meeting a twelfth of her needs. To maintain merely essential equipment she needs a minimum import of 6 m.t. In 1913 she bought from England 11 m.t., but is now receiving less than a third that amount. She has bought some more from the United States, but is altogether very badly off. She is doing her best with water power in the north, and is cutting down forests at such a rate that they threaten to be exhausted in five years.

Germany, not counting Saar and Alsace, produced in 1913, 173 m.t., and last year 109. After assigning the Saar field to France, the Peace Treaty assigned 39 in the first year, and in the following years 43 m.t. a year to France, Belgium, and Italy. The Spa Agreement reduced it to 1 m.t. a month for six months, with power to the recipients to choose what kind they will have. Before the War German net exports were 37½ m.t. Hamburg took several millions from England, and German coal that would have gone there was exported into the rest of Europe. This year output is higher. It was expected to reach 126 m.t., but the extra shifts in the Ruhr seem likely to bring it up to 130 m.t. But this includes the output of Upper Silesia, where the Allied Commission appointed to supervise the district before the plebiscite has allocated coal to Poland, Austria, Bohemia, &c., without any legal title so to do. Germany asked that she should be guaranteed at least 1.5 m.t. a month from this district if she is to fulfil the Spa obligations. When she has exported further amounts of coal in order to get absolutely necessary fuel-stuffs from Denmark, Holland, and Switzerland, which in their turn stand desperately in need of it, and sent some coal to Austria which is threatened with extinction if her supplies are cut off, she will have left about 55 per cent. of her normal needs, if 1920 is taken as a whole. Since this proportion is utterly inadequate for such a highly industrial community, in the first part of the year Germany failed to supply what the Treaty demanded. Now, when output is a little better, the exaction of a much larger amount, puts her in a worse position. Though she may furnish the 2 m.t. a month, she will be quite unable to improve her condition, in which industry gets only about a third of its requirements, though communications and public utilities are drastically rationed.

In addition to hard coal Germany produced before the War large quantities of soft coal or lignite. The present production is larger than it was then, and wherever possible it is being used for industrial purposes. Pre-war consumption of lignite was entirely internal and its value is limited. For many industries it is useless, and its fuel worth varies very much from as little as 10 per cent. of hard coal to a very occasional 50 per cent. The present rate of production per annum is 105 m.t.

Norway, Sweden, Denmark, and Holland are all very short. They exploit water power and peat as much as they can, and import at high cost from United States, South Africa, and Australia. Holland has increased the output considerably from her small beds since 1913.

Hungary and Jugo-Slavia have a few mines. These do not meet the need and the transport difficulties make things even worse. But they are not so badly off as they might be, since they are agricultural countries with food supplies that would be adequate if properly distributed. Road transport with some of England's Army lorries has been suggested as suitable for the Balkans.

Poland has a few mines that kept working through the War and produce almost the pre-war amounts. Poland claims that she needs 18 m.t. a year, but gets scarcely 6. Even with fair supplies from Upper Silesia, Poland cannot be said to be properly furnished with coal to meet present needs. War has, however, reduced her industrial equipment very largely, so that for the moment she could not use up profitably all she claims if she had it. Some Polish leaders want to turn her into an industrial country. Meanwhile the Upper Silesian question is not settled, and the Czechs, alleging that Poland has not paid for what coal she has had of them, have stopped deliveries.

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Czecho-Slovakia is best off of the Central European States. She includes most of the mines of the former Austro-Hungarian Empire, and has been allotted the coal area in Teschen on the ground that her industrial development is greater than Poland's and stands in greater need of fuel. Since the mines produce over 80 per cent. of pre-war amounts, and the Czechs are chary of exporting any, they are comparatively well supplied.

Austria is worst off. The mines that supplied her have almost all passed into the hands of Czecho-Slovakia. Vienna does its best with the few mines left, tries to develop fields lately found, and to use such water power as is in the country. But the industrial and urban population is out of all proportion to the resources left her, so that she is at the mercy of the Czechs who are not always friendly, and has nothing else but uncertain amounts from Upper Silesia (which used largely to supply her) and other parts of Germany. Had Austria been permitted to join Germany, conditions would probably be better and the outlook more hopeful. Vienna must diminish if not decay, though at present for example, engineering firms that could manufacture for export and even have raw material in fair quantities are idle through lack of fuel.

The United States has ample supplies of coal for her own use and a surplus for export. Transport difficulties and bad distribution internally cause the authorities every now and then to put embargoes on exports. Before the War she exported 16 m.t., chiefly to Canada. She maintains this Canadian export, is replacing British exports to South America, and sends considerable quantities to Europe, though not quite regularly. France, Italy, Spain, Switzerland, and Denmark are among the chief purchasers. Some German industries even with a secure export market have bought U.S. coal. She could without much strain send Europe 20 m.t. a year. Her output per man is much higher than in England, because many of the seams are easier to work, the capital employed per head is much greater, and, it must be admitted, the labour conditions are decidedly inferior.

South Africa has lately sent coal, not a large amount, to Europe. Australia with the cheapest coal in the world has sold some in Norway at the same price as English coal. Indian coal is hardly sufficient for India's needs and does not seem suitable for bringing west of Suez. Spitzbergen produces a little which goes to Scandinavia. Even China is selling small cargoes in N. Europe.

When Russia re-enters European economics the demand for coal will be increased, for although Italy used to get a little from the Dniez fields, Russia has always been dependent on external supplies, her fields are in very bad order, and the Soviet reconstruction programme demands heavy fuel consumption.

The total deficiency in the amount of coal is at least 30 per cent. Since so much is used merely in keeping plant in working order, the percentage of efficiency from the industrial standpoint is much lower. A 10 per cent. increase in the supply would mean much more than a 10 per cent. increase in utility. Another thing is that the quality is often very inferior. We need not accept such complaints, for instance, that French coal owners are deliberately exploiting inferior grades and keeping the better till later, or that English export coal often contains a high percentage of dirt and stone, but some account must be taken of this factor. The bad distribution of sorts of coal is another factor. A factory or furnace may have to make shift with a bad coking coal instead of a good one which lies across some frontier and cannot be bought.

Causes of the Shortage.

The shortage is primarily due to the War. In 1913 the world output reached its highest point, and though the easier and richest seams under exploitation were gradually giving out and mining was being transferred to deeper levels, with technical advances and the opening up of new fields that output would have been maintained for some years at least. During the War mines were worked uneconomically: repairs were reduced to a minimum, new machinery was not installed, developments were not continued. In all the countries at war many expert miners were killed or disabled. On the Continent bad food reduced the efficiency of the rest. In war areas mines and machinery were damaged or destroyed, especially in N.E. France, where the Germans ruined mines that normally produced over 18 m.t. These may be restored completely by 1925 or 6, but although being repaired faster than was hoped, scarcely before. No fresh developments of coal mining were undertaken except in the lignite fields of Germany. It is to be noted that lignite production was well maintained both during the War and since. The reasons are that it is easily worked from the surface, can employ unskilled labour to a large extent, and is exempt from the provisions of the Treaty of Versailles.

The period after the Armistice of November, 1918, is marked by a fall in output. As far as Central Europe is concerned, this is due to the cumulative effects of the Blockade, which still remained in force. But everywhere the reaction that followed the high tension of war allowed full play to all the factors that were producing inefficiency. Political and industrial excitement was to be expected. Strikes and agitation in all countries reduced the number of working days, and since they were as often as not concerned with conditions of work, where they were successful, lessened the number of hours worked per day. The current of industrial unrest ran strongly. The workers showed more and more reluctance to work under a system of which they disapproved and to which they ascribed their calamities. Had some temporary arrangement of the political future of Europe been come to, it would have made for stability and willing work. The immediate resumption of something like normal relations of trade would have improved the equipment, the temper, and the efficiency of the mining populations. Things went otherwise. Nevertheless, in Germany at least, difficulties were being gradually solved and the output of coal was rising up to the presentation of the Treaty.

The Treaty of Versailles did little for Europe economically. It did harm to several parts of it, and it has yet to be seen whether the benefits it meant to confer on other parts will come about. The German saw some of his fellows, indubitably German in nation and sympathy, transferred to French control, and others practically pledged to Poland. His own labour was mortgaged to the Entente to an intolerable degree. Nothing was done to improve his wretched condition. So he lost a good deal of motive for working steadily and keeping tranquil. Austria was reduced to a province, with an enormous and resourceless town population. Her coal mines went to Bohemia. She was not permitted to join Germany from which she used to draw 13 m.t. a year. The Czechs have at times even held up such consignments as the Poles were sending her, though now again they seem more friendly.

Bohemia, with comparatively a good supply of coal, has been faced with serious transport difficulties. The Teschen dispute interfered with the utility of the mines there, since the miners were uncertain to which State they would presently belong, and, the Czechs say, the Entente Commission in charge was incompetent. The Teschen field has been handed over to the Czechs on the principle—sound in itself—that it is better for mines to go to a country that is already industrialized than to one that is agricultural. This ought to apply as well to Upper Silesia, which awaits a plebiscite. Its transference to Poland would mean disaster to Germany and Austria, while on the other hand Poland might be guaranteed so much of the output. The chief argument for the separation of the district from Germany is that German rule has been oppressive. Some of the inhabitants favour autonomy, which the Treaty does not allow.

One most important cause of the decline in output is the fewer hours worked. In England, France, and Germany, the reduction has been considerable. The expectation that reduced hours might not bring reduced output has not been realized so far. In Central Europe the reduction was made necessary by the inferior physical condition of the workers. These have gone on extra shifts when they could, sometimes for special objects, as in the Ruhr, where extra coal was got out in exchange for butter from Denmark. The Spa conference recognized their need for better food. Negotiations were started for the increase of the hours worked from the pre-Spa number of an agreed seven hours' day plus extra shifts paid for at double rates and averaging one hour and ten minutes. The miners received the Spa Protocol with protests, declaring that it made necessary a ten hours day. Lately they have complained that although the stipulated coal has been delivered they have not yet received the food and clothing promised.

Famine conditions in Europe have reduced output and in its turn reduced output has increased the famine. With sufficient coal Germany could make nitrogen fertilizers with which to revive the agriculture of Central Europe. Bad social conditions make the miners indisposed to work. This is true not only in Germany, but in England also. In both countries the housing problem has created discontent and sullenness. In communities where higher wages are the prelude to higher prices, where the prospect of an improved standard of living is remote, where owing to the prevalent conditions of housing, town life, &c., an increase in money income will yield them no further enjoyment of life, the miners prefer leisure to more money. If therefore piece-rate payment were enforced, as many people advocate, in many if not in most mining districts, no great increase of output would ensue.

The cumulative effect of shorter hours, bad food, worn-out equipment, and social dissatisfaction is that in England, France, and Germany more miners are employed and less coal is produced.

In all countries there have been strikes with serious results. In part they have had a political aim, but chiefly they have been industrial, to obtain better conditions. It is hard to see how they could have been avoided. Although they bring hardship and disaster both where they occur and in other countries as well, it is unreasonable to deny miners the same right of striking as other workers possess, or to ask them to make special sacrifices when perhaps the coal owners are free to gain advantages. The English, the French, and the German miners demand nationalization or socialization of the industry. Their Governments are unwilling or unable to grant it. The English Miners' Federation refused the Government's alternative proposal, and put forward a programme comprising an advance in wages and the reduction of the price of coal for domestic use, the cost to come out of the profits the Government is making from export coal. The Government rejected these demands, disputing the figures and deductions of the Federation, and repudiating the notion that the miners have any right to determine price policy. In the course of negotiations the miners modified their demands very much, but deadlock was reached again. In France things are quiet for the time. In Germany the agitation for socialization has died down in face of the Entente demands. So far the German Government's socialization policy has resulted in nothing more than State control, and allegations are freely made that the coal owners are making fabulous profits.* The tide of revolutionary enthusiasm has greatly

* The Commission appointed by the German Government to discuss the complete nationalization of the mines made a report recently in which, (a) the Trade Unionists and Socialists urged immediate transfer with fair compensation to the owners, to a semi-governmental body of 100, including 25 miners; (b) the other members, among them some of the biggest employers of Labour, advised that the mines should become public property at the end of 30 years, in the meantime to be managed by the private owners under the strict supervision of the semi-official National Coal Council.

interrupted industry, but provided some hope of better things is given to Central Europe, it may have definitely subsided. The German miners belong to a large extent to the "Christian Unions" which are much more conservative than the other unions. But even they were gravely disturbed when the Spa Protocol was announced.

The transport chaos is closely bound up with the coal situation. In the Ruhr lack of trains forced pits to stop working when they had stacked coal till they had no more room. In England the restriction on exports has sometimes had the same result for pits that produced solely for foreign markets. Not even the United States is free from transport trouble. In Europe locomotives are few or in disrepair. Trucks are seriously lacking. Spare parts are needed. The permanent ways have deteriorated. Lack of fuel on the other hand has prevented the best use being made of what there is. Most countries ration their railways severely. Water carriage has been interrupted through shortage of coal for tugs and by serious floods.

The Spa Agreement.

From August 1, 1920, Germany is to deliver two million tons a month for six months. The value of this coal as far as it is delivered by rail or inland navigation will be credited to the reparation accounts, the value being the German inland price. Since the coal is to be of specified quality and kind, the country taking any of the coal is to pay a premium of five gold marks a ton to be devoted to the acquisition of foodstuffs for the German miners. Upper Silesian coal will be distributed by a Commission on which Germany will be represented, subject to the approval of the Reparations Commission. A Commission on which Germans are represented shall meet to discuss how food and clothing conditions among the miners can be improved. The Allies will make advances to Germany at the end of every month equal in amount to the difference between the price paid as above and the export price of German coal f.o.b. in German ports, or the English export price f.o.b. in English ports whichever may be the lower. A permanent delegation of the Reparation Commission will sit in Berlin and control distribution, schemes for which the Germans are to work out and submit.

If by November 15, 1920 the total deliveries for August, September, and October have not reached 6 m.t., the Allies will proceed to occupy more territory in Germany, in the Ruhr or elsewhere.

The Spa Agreement has thus reduced the coal demanded from 43 m.t. in the Treaty to 24 m.t. Before Spa the greatest amount delivered by the Germans was 1,100,000 tons in May. It is hard to see how they can find almost double that quantity, even with the improved output of recent weeks, especially since Upper Silesian coal is in the hands of a commission which is in turn itself in the hands of the Reparation Commission. The Germans asked for at least 1.5 m.t. a month of this coal, and are still complaining that they do not get it. Trouble has again broken out in the district.

Though the original German offer of a million tons a month with the prospect of 1.7 m.t. towards the end of 1921 was much more practicable, nevertheless, if they secure the Upper Silesian coal and the increased output reported lately can be maintained, the 2 m.t. may be forthcoming, even in the winter, as it was in August. A *Berliner Allgemeine Zeitung* report in July stated that in the first half of 1920 the Ruhr produced roughly 41 m.t., while in the same half of 1919 only 31.5 m.t. In August the Ruhr pro-

The price arrangements have been hostilely criticized, of course from opposite points of view, both in France and in Germany. The inland price at Ruhrhafen for good coal at the time of the agreement was about 260 marks, so that with the five gold marks premium (at that time—about 42 paper marks) the German f.o.b. price to the Allies would be 300 marks. The British f.o.b. price was calculated at the same time to be 1,125 marks. The difference of 825 marks will be paid to Germany by the recipient of the coal, but this part of the price is only to be treated as a loan at 6 p.c. to be repaid very quickly to the country making the advance. It is secured on property already in the hands of the Allies, and takes precedence over other sums owed by Germany. England for example has entered £5,000,000 advanced to her Allies as part of this credit against receipts from the sale of her share of the surrendered German merchant shipping. While German coal cannot affect the world price, which is in fact the British export price, France thus gets a great deal of coal at about a third or less than what she would give for English or American coal. Still the French complain that they have been hardly treated. The Germans also complain, though they admit that it is an improvement on the old arrangement. No change is made about sea-borne coal, which under the Treaty is valued at the German export price f.o.b. or the British export price whichever is lower. Since Germany has lost her mercantile marine, she cannot take advantage of this.

If Germany fails to produce the 6 m.t. by November, the Ruhr may not after all be occupied. It is difficult to see how occupation will increase the output, since the Saar has been very restless under French control and the miners there produce at a lower rate than in the Ruhr. Such threats, which are repeated on any excuse by some Frenchmen, have been answered by protests from Germany, and can only make the process of recovery and reconstruction much harder. Occupation in November would be a calamity, though there are not wanting people who say that it is even desired by certain German coal interests.

The effect of Spa on the coal situation cannot be seen for some time. It is certainly an improvement on the previous demands, and so may encourage the Germans to produce more. But the vagueness of the proposals about Upper Silesia and conditions in the Ruhr must diminish the help they were meant to give. It throws a greater burden on Germany inasmuch as the impossible Treaty terms were in practice ignored, and so the actual deliveries are increased. Insistence on the monthly 2 m.t. means almost a cessation of the vital and valuable export to Denmark, Holland, and Switzerland. The omnipotence of the Reparation Commission weakens the prestige of the German Government at home and the benefit that might come from the various commissions which are to deal with Silesia and social conditions.

English Export Policy.

The English Government aims at satisfying English needs first. It limits coal owners' profits and exempts England from competition in the world market at world prices. Home prices are fixed below cost and the deficit is made good from the profits of the export trade. For example, French imports have to pay for British coal 10 s. to 150s. a ton at the pithead for industrial coal sold in England at 43s. to 45s., and 20s. for industrial coke sold in England at 52s. Despite the complaints of the exporting centres and the confusion that was being caused up to September when a strike was feared, the Government repeatedly declared that it meant to limit exports to 20 m.t., afterwards adding another ton. Most of this coal is pledged to France and Italy. But as we have said, exports in practice have exceeded this limit. The Government has contributed to its exchequer large sums gained in exporting coal. The miners have asked for lower prices at home and more wages. Their policy too is based on profits made from exports, but they have the excuse that they have no chance of altering Government policy to such an extent, and so must make what they can of it. It is hard to justify this policy of charging maximum prices for very limited supplies, for it is not against ex-enemies that it is practised but against neutrals, and especially exhausted allies. Except from the standpoint of narrow and nationalistic self-interest, the only excuse would be the theory that the first requisite for the stability of Europe is a contented England.

Remedies.

- (a) Increased output.
- (b) Better distribution.
- (c) Alternative fuels.

(a) Production and better distribution are the chief and obvious remedies for the shortage. To secure a greater output the miners must be more or less contented and satisfied that they are not in an unduly unfavourable position. In England this seems to necessitate a policy more akin to their demand for nationalization than the Government scheme for district supervision provides. Nor can it be hoped that their acceptance of the Government alternative to their wage demand will leave them in the best of moods. In Germany the feeling that they are the serfs of the Entente, and peculiarly of the French, must be made less acute. Socialization of the mines should be proceeded with, since there is a firm conviction that a small number of owners are making exorbitant profits. The miners must have the first call on improved food supplies, even though they themselves realize that it is unfair to the rest of the population. Proposals are sometimes made to enforce payment by results, to lengthen shifts, and to abolish minimum wages. Most of these proposals are to be deprecated in themselves, while the cost of imposing even the better ones would outweigh the results. The lengthening of the shifts in the Ruhr owing to the Spa Agreement is a backward step. One of the chief factors that make the output per man in several United States fields so high compared with that in Europe is labour conditions that no European workers would tolerate. It is to be regretted that the Reparation Commission prohibited German exports to neutral countries in return for specified goods, for it checked a movement which might have increased the output and eased distribution over the Continent.

Another obvious step is to increase the number of workers in the mines. The introduction of Polish and Italian workers into Germany and France has difficulties, which however are not insuperable. This unskilled labour is inefficient but acquires skill in time. If stability of social and political conditions can be secured, immigration within limits is feasible. One problem is the finding of accommodation for the new-comers, as housing shortage is everywhere.

Outstanding political questions like the fate of Upper Silesia should be settled immediately. The state of uncertainty, and the

campaign of propaganda must decrease the efficiency of miners, coal owners, and general population alike. A smaller but perceptible effect is to be seen throughout the States interested in the decision. Outside areas will furnish neither capital nor credit. Every one waits for what will happen next.

The other main thing is to bring the mines up to the highest pitch of efficiency. Old equipment must be repaired and new machinery installed. New fields must be opened up where possible. Coal must be distributed from the pit-head with the best results. From several places in Europe new fields have been reported, and several areas already exploited could be opened up more fully. This involves the question of credit advances, national or international, and whether such developments should be undertaken publicly or privately. Where deliberate efforts to restrict coal production are reported, as for instance Sénateur F. Albert's allegations in *L'Œuvre* (August 12), some international body ought to interfere.

Negatively the coal supply could be eked out by economy in use. With present modes of consumption Central Europe must long ago have achieved along this line its greatest possible success.

(b) Distribution at present is far from what it might be. But every scheme would be hindered by the transport problems that afflict all countries to different degrees. Almost every country wants many more trucks, though from France it is reported that miles of unused trucks, French, German, American, and English, apparently in good order, stand in railway sidings. Locomotives are insufficient in numbers and often badly worn. Railways have had to be strictly rationed, and so are unable to cope with their work. Any scheme for improving the coal situation must deal *pari passu* with the railways. As for the possibilities of road transport, England has huge dumps of unused lorries which might well be sent to lands without adequate railways, but where petrol might be obtained.

Were the shipping of the leading mercantile nations put under some international control, either of its employment or of its charges, or both, the importation of coal into Europe from the United Kingdom, the United States, and other distant minor producers would be easier. But since there is a greater quantity of shipping in the world than there was before the War and the amount of trade in bulk is very much smaller, freights are gradually dropping, so that soon they may barely cover actual costs. Germany, having lost her ships, is crippled, since she has to pay world freight rates wholly out of her depreciated currency, while had she a fleet she would pay part at foreign exchange rates and part at internal rates which are very much more favourable.

Political passions and racial animosities prevent the best measures in Eastern Europe. If Czecho-Slovakia, Austria, Hungary, and Jugo-Slavia postponed their differences, they could use their exiguous supplies to better advantage. The "Little Entente," if established, may do a good deal of good, though there is danger lest Hungary and Poland form a league against it. No support or aid should be given from the West to such States as Poland, so long as they continue to spend ten times the amount they devote to reconstruction on wars that are almost or quite without excuse. In the West it is politics again that prevents Europe being treated as an economic whole, one patient afflicted with one set of symptoms and attacked with one disease.

Ideally the best system of coal distribution would be a European pool, managed by a Council with an eye single to restoring economic prosperity. Such a body would ascertain each country's minimum requirements and the total amount of coal produced. With a certain amount of necessary regard to past history and present status, it would determine as justly as possible what percentage of its demands each country should keep or receive, regard being had to the different kinds and uses of coal and the easiest scheme of distributing it. It could facilitate imports from America through an international loan, by which it could also aid countries like Austria which cannot at present pay for all their imports. It must have control over the use a country made of the coal it obtained, and be given power to exclude from participation any State that behaved unfairly. There would be danger of tyranny in such an institution, but that must be risked. Were the League of Nations a reality, it might well perform this function, but the basis must be the co-operation of all parties concerned.

Alternatively a scheme of distribution might be formed on the political state of Europe. Some French and Italian writers have urged, with great force, that England should pool her supplies with France and Italy. With German contributions and increased English exports these three countries would be provided for. Neutrals presumably would depend solely on the United States, &c., which would no longer supply France and Italy, while the rest of Europe would take the surplus, if any, of German and Czech production.

With no definite scheme other than the provisions of the Peace Treaties, the solution would take the form of isolated and individual competitive barter of coal against other commodities. The Czechs, for example, arranged to give 200,000 tons of lignite for 100,000 tons of German hard coal. This procedure is clumsy and wasteful, and would not hasten very much the restoration of the mechanism of international trade. But except in countries without resources it would tend to improve the general economic situation. Were it not that English exports are limited and American exports liable to interruption, English and American financiers who control undertakings in Europe could keep them fairly well supplied with fuel.

Any scheme whatever or even reliance on business enterprise to effect a recovery demands an increase in English exports and the encouragement of American exports. Unless the English output grows this would mean a certain restriction in English consumption. The method of keeping down the price of coal in England by making large profits on exporting coal should be modified. Needless to say both restriction of home supplies and increase of price would meet with strong opposition. One way might be to de-control the export trade and subject it to export duties. With provisos that the home market should be met first, and that certain countries should be guaranteed so much, this might give Europe a little more coal at about the same price as now or somewhat higher. The heroic method would be for the Government, realizing that coal is a prime necessity, to drop the idea of making profits off it and sell it both at home and for export at cost of production.

The International Miners' Conference at Geneva approved the idea of an international control board, and left its permanent office to work out details. It was firmly against any policy of increasing hours of work.

(c) The development of alternative fuels is not hopeful, since unless it was supported by very heavy capital expenditure it would

not take effect for several years. The amount of oil produced annually is not more than 75 m.t., equal at the most to 100 m.t. of coal. The increase in the supply is scarcely able to keep up with the advancing American and English consumption. This shortage is reflected in the price, which makes it as costly as coal.

In this country and in Germany the low temperature carbonization of coal to yield gas, oil, and smokeless fuel has been advocated. While its advocates have been criticized for undue optimism, it appears to promise a good deal. But before it can be fully developed there must be considerable capital expenditure and technical research.

Power alcohol will perhaps solve the fuel problem for the next generation. At present it has been derived from potatoes, molasses, sugar beet, and maize. But these are restricted for the present and several technical problems await solution. South Africa, Uganda, and some other areas have each been estimated to be able to supply enough alcohol for the world, but not for some years to come.

Many people look to the distribution of electricity from central power stations, and some of them have asserted that with a comparatively small capital outlay England could save 50 m.t. of coal a year. But here again technical experts are not agreed.

Some benefits could doubtless be got from various economies in use, the utilization of slag heaps, &c. In Europe water power is already exploited but its benefits seem not unlimited. In Sweden, for example, the tendency seems to be to look upon the peat beds as more promising. Denmark, too, has lately been developing her peat deposits.

In general we may say that for the present the thing to concentrate on is the increase in the output of coal. The great advantage of this is that the machinery for using raw coal is already at hand, whereas alternative fuels require new machinery and are yet to be developed. They do not therefore affect the present to any great extent. But given an international commission for developing them and the collaboration of experts, the prospects would be very much better.

APPENDIX

MONTHLY average of coal production in 1,000's of Metric Tons:

	1913	1918	1919
U. K.	24,336	19,282	19,731
France	3,494	2,078	1,869 (inc. Lorraine)
Belgium	1,904	1,152	1,533
Canada	1,135	1,133	
Holland	159	296	283
Germany (Ruhr, Aix, Silesia, Saxony) ..	14,383	12,301	9,049
U. S. (maximum in 1917)		54,256	

(Supreme Economic Council Bulletin, Vol. I., March 9th, 1920).

Aggregate figure of coal output, in million metric tons:

	1913	1919
U. S.	517	494
U. K.	292	237
Germany (exc. Saar and Lorraine) ..	173	109
France (inc. Alsace and Lorraine) ..	44	22
Saar	12	8
Belgium	23	18

Total for these European countries .. 544 394

German Lignite 87 94

Drop in European production 27.5 per cent.

(Supreme Economic Council Bulletin of Statistics, Vol. I., Feb. 10th, 1920).

Coal exports from the United Kingdom in the first eight months of 1913 and 1920, (m.t.). Per cent in 1920.

To	1913	1920	Per cent in 1920
Russia	3.8	.06	1.6
Sweden	2.8	1.1	39.9
Norway	1.5	.6	40
Denmark	1.9	.8	42.1
Germany	5.9	-	-
Holland	1.4	.1	7.1
Belgium	1.3	.6	46.2
France	8.5	8.6	100
Spain	1.7	.1	5.9
Italy	6.3	2.1	33.3
Austrian ports ..	.7	.09	13

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